

Rare species of antlions (Neuroptera: Myrmeleontidae) new for the fauna of Caucasian and Middle Asian countries

Редкие виды муравьиных львов (Neuroptera: Myrmeleontidae), новые для фаун кавказских и среднеазиатских стран

G.N. KHABIEV & V.A. KRIVOKHATSKY*

Г.Н. ХАБИЕВ, В.А. КРИВОХАТСКИЙ

G.N. Khabiev, Prikaspiyskiy Institute of Biological Resources, Daghestan Scientific Centre of the Russian Academy of Sciences, 45 M. Gadzhieva Str., Makhachkala 367025, Russia. E-mail: genom90@mail.ru

V.A. Krivokhatsky, Zoological Institute, Russian Academy of Sciences, 1 Universitetskaya Emb., St Petersburg 199034, Russia. E-mail: myr@pochta.ru. *Corresponding author.

Two species new for the Russian fauna, *Neuroleon (Ganussa) lukhtanovi* Kriv. and *Pseudoformicaleo gracilis* (Klug), are collected for the first time from different localities in Daghestan; *N. lukhtanovi* is also first indicated for Kazakhstan and Kyrgyzstan. *Palpares turcicus* Koçak and *Nicarinus poecilopterus* (Stein) are recorded for the first time from Azerbaijan and Armenia, respectively.

Два новых вида для фауны России, *Neuroleon (Ganussa) lukhtanovi* Kriv. и *Pseudoformicaleo gracilis* (Klug), впервые собраны из нескольких местообитаний в Дагестане; *N. lukhtanovi* впервые указан также для Казахстана и Киргизии. *Palpares turcicus* Koçak и *Nicarinus poecilopterus* (Stein) впервые отмечены в Азербайджане и в Армении соответственно.

Key words: antlions, new records, Russia, Daghestan, Kazakhstan, Kyrgyzstan, Azerbaijan, Armenia

Ключевые слова: муравьиные львы, новые находки, Россия, Дагестан, Казахстан, Киргизия, Азербайджан, Армения

INTRODUCTION

The Caucasian fauna of antlions (Neuroptera: Myrmeleontidae) has never been entirely revised. Previously, only 17 species of antlions were recorded from Daghestan based on the original data and old collections (Ilyina & Krivokhatsky, 2012). The only list of species recorded in adjacent Azerbaijan (Kurbanov, 1996) includes 14 species, but three of them are distinct synonyms. In the present study, *Palpares turcicus* Koçak is additionally recorded for the first time from Azerbaijan, and another rare species, *Nicarinus poecilopterus* (Stein), is first recorded from Armenia.

Two species, *Neuroleon lukhtanovi* Kriv. and *Pseudoformicaleo gracilis* (Klug) collected by Khabiev in 2013 are new species for Daghestan and Russia. Hereby, adding new records to known fauna (Krivokhatsky, 2011), we estimate the number of antlion species of Russia as $34+2=36$. Another recent material shows that *Neuroleon lukhtanovi* is also new species for Kazakhstan and Kyrgyzstan. The material studied is deposited at the Zoological Institute, Russian Academy of Sciences, St Petersburg (ZIN), but some specimens recorded as “fixed” will be used for genetic analysis (ZIN).

ANNOTATED LIST OF ANTLIONS NEW FOR STUDIED COUNTRIES

Order NEUROPTERA

Family MYRMELEONTIDAE

Genus *Neuroleon* Navás, 1909

Neuroleon (Ganussa) lukhtanovi Krivokhatsky, 1996
(Figs 1, 2)

Neuroleon (Ganussa) lukhtanovi Krivokhatsky, 1996: 303; Mirmoayedi et al., 1999: 55 (Iran); Stange, 2004: 205 (catalogue).

Material examined. **Russia, Dagestan:** 2 males & 25 females (fixed), 1 male & 1 female (pinned), Chirkata, at light, 15 July 2013, Khabiev; 1 male (pinned), Chirkata, 16 July 2013 (Khabiev); 1 female (fixed), "Sarykumskie barkhany" Nature Reserve, dunes, 22 June 2013, Khabiev. **Kazakhstan:** 3 males, 2 females, *Shymkent Prov.*, Turpan vill., 20 July 2000, V. Lukhtanov. **Kirghizia:** 1 female, Tash-Kumyr, E of Fergana Valley, 750 m, 30 July 1995, V. Lukhtanov; 11 males, 8 females, Tash-Kumyr, Fergana Valley, confluence of rivers Naryn and Kara-Su, 1 August 1996, V. Lukhtanov.

Distribution. Uzbekistan, Tajikistan, Turkmenistan, Iran, Kirghizia, Kazakhstan, Russia (Dagestan).

Notes. *Neuroleon lukhtanovi* is a wide-spread Turanian eremian species preferring mountain foothills; *N. lukhtanovi* is the smallest antlion in the Palaearctic. Here the species is recorded for the first time from Kirghizia, Kazakhstan and Russia. The Caucasian disjunctive population has no morphological features of any subspecific rank. On July 16, 2013, high activity of flying adults was observed in the environs of Chirkata Village of Gumbetovskiy District, where rocky biotopes predominate. As we know from several localities (Chirkata, Tash-Kumyr), high abundance of this species may be sporadic or permanent.

Genus *Pseudoformicaleo* Weele, 1909

Pseudoformicaleo gracilis (Klug, 1834)
(Figs 3, 4)

Myrmeleon gracilis Klug, 1834: t. 35, f. 5; *Pseudoformicaleo gracilis* (Klug) – Weele, 1909c: 25

(genotype); Hölzel, 1972: 60 (*Nadal anterior* Navás, 1913:454 – syn.); Krivokhatsky, 1998: 40 (distr.); Aspöck et al., 2001: 289 (distr.); Stange, 2004: 121 (catalogue).

Material examined. **Russia, Dagestan:** 1 female (pinned), Talgi Canyon, reared from larva collected on 20 June 2013, Khabiev; 3 females (fixed), Tarki, reared from larvae collected on 12 and 27 June 2013, cocoons appeared on 4–17 July 2013, Khabiev; 1 larva Terskaya, 14.VI.2013, cocoon appeared on 7 July 2013, female (fixed), reared ex larvi, Khabiev; 1 larva, Sarykum, 22.VI.2013, cocoon appeared on 1 August 2013, female (fixed), reared ex larvi, Khabiev. **Iran:** 1 female, "Surmich vill., Bampur, SE Persia, 7.IV.1901 (N. Zarudny)".

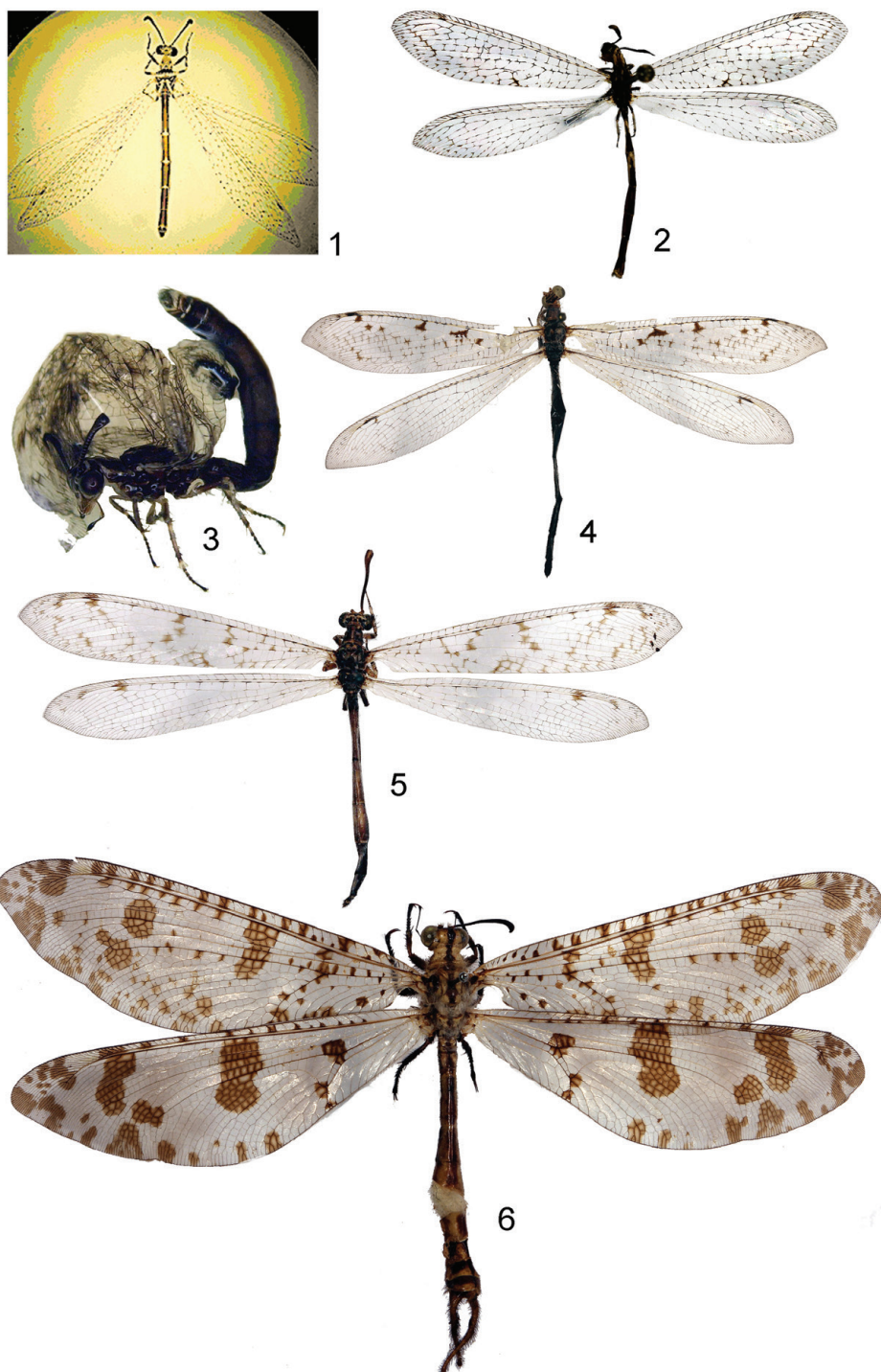
Distribution. Ancient-mediterranean species known from North Africa and Middle East. Here the species is recorded from Russia (Dagestan) for the first time. The new record is adjacent to the Kura-Araxian zoogeographic province. Probably *P. gracilis* penetrated from Middle East, where this species may be autochthonous (Krivokhatsky, 1998, 2011).

Genus *Nicarinus* Navás, 1914

Nicarinus poecilopterus (Stein, 1863)
(Fig. 5)

Myrmeleon poecilopterus Stein, 1863:421; Navás, 1916: 83 (as *Nisteus poecilopterus*); *Nicarinus poecilopterus* (Stein) – Esben-Petersen, 1918: 109 (*Nicarinus basilicus* Navás, 1914: 244 – syn.); Hölzel, 1972: 59; Aspöck et al., 1980: 307; 2001: 289; Krivokhatsky, 1998: 40; Kurbanov, 1996: 207; Stange, 2004: 118 (as *Nemoleon poecilopterus*).

Material examined. **Armenia:** 1 female, Martushevskiy, 10 August 1935, P. Veltishchev; 1 female, Arax River, Sjurtui gate, 1, 4–5 September 1932, M. Rjabov; **Azerbaijan:** 2 males, 4 females, Geok-Tapa, environs of Elisavetpol, at light, 2 July 1901, R. Schmid (E. Luppova det.); **Greece:** 1 male, Evrytania, Kiapsi, 800 m, 26 July 1926, Holtz; **Kirghizia:** 1 male, 1 female, Tash-Kumyr, confluence of Naryn River and Kara-Su, 1 August 1996, V. Lukhtanov; **Tajikistan:** 1 male, Kondara Canyon, 30 km N of Dushanbe, at light, 11 September 1991, P. Ustjuzhanin; **Turkmenia:** 1 female, Dzhebel, 9 July 1934, V. Popov (E. Luppova det.).



Figs 1–6. Myrmeleontidae: 1, 2, *Neuroleon lukhtanovi*, female (ventral view) from Chirkata (1) and male (dorsal view) from Tash-Kumyr (2); 3, 4, *Pseudoformicaleo gracilis*, female (lateral view) from Talgi (3) and male (dorsal view) from Bampur (4); 5, *Nicarinus poecilopterus*, female (dorsal view) from Geok-Tapa; 6, *Palpares turcicus*, male (dorsal view) from Geok-Tapa. Scale bar: 10 mm.

Distribution. Ancient-mediterranean species known from southern Europe, Caucasus (Armenia, Azarbaijan), Middle East, Arabian countries and Iran and probably from northern part of Africa (Sudan?). Here it is recorded for the first time from Armenia.

Notes. *Nicarinus* is a monotypical genus characterized by the apomorphic condition of cubital fork in both pair of wings in contrast to *Pseudoformicaleo*, which has a triangular fork. *Pseudoformicaleo gracilis* is a close-related species sympatric with *N. poecilopterus* in the East Mediterranean area. These species are similar in many morphological features, e.g. the shape of tibial spurs, and differ only in the shape of cubital fork (see Figs 3 and 4) (Krivokhatsky, 1998). Both species are distributed in the same areas but until now they were found in separated localities.

Genus ***Palpares*** Rambur, 1842

Palpares turcicus Koçak, 1976 (Fig. 6)

Palpares hispanus turcicus Koçak, 1976: 97; Aspöck et al., 1980: 284 (as *M. libelluloides* L.); 2001: 226 (as *P. hispanus*); Stange, 2004: 53 (as *P. hispanus*); *Palpares turcicus* Koçak: Koçak et al., 1995: 6; Krivokhatsky, 2011: 95 (valid).

Material examined. **Azerbaijan:** 1 male, Gyandzha Prov., "Geok-Tapa, Aresh [District], [environs of] Elis[avetpol] 12.VII.1915 (L. Bianchi)".

Distribution. *Palpares turcicus* is a Hircanian-Anatolian species from the *Palpares libelluloides* species group. Here it is first recorded for Azerbaijan from a single old collection specimen. The specimen from Geok-Tapa was collected not far from the type locality of *Myrmeleon nordmanni* Kolenati, 1846, which was described by Kolenati as "Provinciae trans Caucasum sitae Elisabethpol, ad pedem montis Ssarijal et Gaendscha-Dagh" (Kolenati, 1846: 117). A male from the type series of *M. nordmanni* was designated as the lectotype and *M. nordmanni* was synonymized with *P. libelluloi-*

des Linnaeus (Krivokhatsky, 2003). Thus, *P. libelluloides* and *P. turcicus* occurring in one region are separated in space and time (*P. turcicus* is known only from an old specimen and was not confirmed from Azerbaijan at the present time).

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